

FINAL REPORT

“The Impact of Health Programs on Behavior Among Three United South and Eastern Tribes

**MISSISSIPPI BAND OF CHOCTAW
Philadelphia, Mississippi**

**PASSAMAQUODDY PLEASANT POINT
Perry, Maine**

**ST. REGIS MOHAWK TRIBE
Hogansburg, New York**

E-34-95

\$118,151

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Project: Impact of Health Programs on Behavior Among Three United South and Eastern Tribes(USET):

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TABLE OF CONTENTS
**"The Impact of Health Programs on Behavior Among Three United
South and Eastern Tribes."**

	<u>PAGE</u>
ACKNOWLEDGMENTS	3
TABLE OF CONTENTS	5
EXECUTIVE SUMMARY	6
INTRODUCTION	8
METHODOLOGY	13
FINDINGS	17
CONCLUSION	43
REFERENCES	50
Attachment A: Selected Comparison Charts	53
Attachment B: Original Proposal/Application	54
Attachment C: Sample Status Report	55

EXECUTIVE SUMMARY

Despite great improvements in recent decades, the health of Native Americans continues to lag behind that of the overall United States population. For the period In 1989-1991, life expectancy was still about three years shorter for Indians than for the U.S. white population. Most of the major causes of death that are considerably more prevalent among Indians than among other Americans are related to individual behaviors, especially alcoholism, diabetes and intentional and unintentional injuries. Thus, any efforts aimed at substantially reducing mortality and improving health among Native Americans must recognize the importance of the behavior of individuals and not be limited to the provision of medical care.

This joint CDC/IHS report describes the results of a 1995-1996 Health Assessment Survey carried out among the Tribal members of three Tribes located within the Nashville Area:

- (1) the Mississippi Band Of Choctaw Indians, Philadelphia, Mississippi, a tribe living on the tribal reservation in east central Mississippi;
- (2) the Passamaquoddy Pleasant Point Tribe, Perry, Maine, living on the coast of Maine, and,
- (3) the St. Regis Mohawk Tribe, Hogansburg, New York, a tribe living on the US/Canadian border in northern New York.

The goals of the survey were:

- To learn the extent to which members of these three Nashville Area tribe are practicing selected behaviors

- that pose risks to their health and well-being, and
- To measure the prevalence of certain health conditions which are related to behavior.

The topics examined in the survey included:

- blood pressure control,
- cholesterol screening,
- tobacco use,
- alcohol consumption,
- drug use,
- weight and diet,
- physical activity,
- diabetes,
- cancer screening,
- maternal and child health,
- family planning,
- AIDS knowledge,
- stress,
- injury prevention,
- and, health care utilization.

The Health Assessment Survey was a population-based, face-to-face survey of a representative sample of tribal members who were at least 18 years of age and living on the tribal reservation. Of the selected individuals living in the survey area of the three Tribes:

St. Regis Mohawk Tribe:

404 were successfully interviewed, of whom 198 were men and 206 were women. A summary chart of selected results of the survey is attached.

Mississippi Band of Choctaw Tribe:

605 were successfully interviewed, of whom 304 were men and 301 were women. A summary chart of selected results of the survey is attached.

Passamaquoddy Pleasant Point Tribe:

436 were interviewed, of whom 192 were men and 244 were women.
A summary chart of selected results of the survey is attached.

INTRODUCTION

Despite great improvements in recent decades, the health of American Indians and Alaska natives continues to lag behind that of the overall United States population (Rhoades et al., 1987a). For the period 1989-1991, life expectancy was still about three years shorter for Indians than for the U.S. white population. In some segments of the population there are even greater differences in mortality. For example, the ratio of Indian to white mortality rates from ages 25 to 44 is more than 2 to 1 (Indian Health Service, 1994). Native Americans are much more likely to die from alcohol related causes, diabetes, accidents, and homicide and suicide than the U.S. population as a whole.

In recent years, cardiovascular and other chronic diseases, intentional and unintentional injuries, alcoholism, diabetes, and mental illness have replaced infectious diseases as the leading health problems of American Indians and Alaskan natives. Because the prevalence of these conditions depends

to a considerable degree on individual behavior, continued health improvements among Indian people and the closing of the health gap between Indians and other Americans will depend to a much greater degree than ever before on changes in behavior, rather than on changes in the delivery and use of medical services (Rhoades et al., 1987b). (This does not mean that economic, social, political, and environmental factors do not play roles in the health gap. Nor does it mean that changes in social, economic, and other conditions will fail to have an impact on Indian health and well-being.)

Recognizing the importance of individual behavior in regard to health, the Indian Health Service (IHS), in collaboration with Indian tribes, has given high priority to the development of health promotion/disease prevention (HP/DP) activities, designed to help individuals and communities act in ways to reduce risks to health (U.S. Dept. of Health and Human Services, 1980). Effective development, implementation, and evaluation of health promotion/disease prevention programs and activities require the availability of data on the prevalence of various health conditions and behaviors that pose significant risks to health. However, such data do not exist for the vast majority of American Indian populations. This information helps to document the prevalence of some important health risk behaviors and allows measurement of the

magnitude of some largely preventable problems.

Statewide Behavioral Risk Factor Surveillance Surveys (BRFSS) are now carried out annually in almost all states. These surveys, done by telephone with technical assistance from the Centers for Disease Control and Prevention, consist of the collection of data on a broad assortment of behaviors related to health and other selected health-related information (Marks et al., 1985). However, these surveys have not been of great value in learning about health risk behaviors among Native Americans. First, the statewide samples contain relatively few Native Americans. Second, even if there were larger numbers of Indian respondents, telephone coverage among Native Americans is often quite low, causing potentially significant biases in results. Third, some issues of considerable importance in regard to the health of Indian people have not been included in the standard BRFSS questionnaire.

In 1987, the IHS began collaborating with Indian tribes and with the Centers for Disease Control and Prevention in the development and implementation of health assessment surveys specifically designed for American Indian populations (IHS, 1988). These surveys consist of face-to-face interviews with a probability sample of specific Indian populations. The information collected in such surveys can contribute substantially to the success of current and future health

promotion/disease prevention activities.

In 1995, the Mississippi Band Of Choctaw Indians, Passamaquoddy Pleasant Point Tribe of Maine, the St. Regis Mohawk Tribe of New York and the IHS Nashville Area Office (covering most of the United States east of the Mississippi River) agreed to carry out a Health Assessment Survey among tribal members enrolled in these three Tribes living on their respective reservations.

MISSISSIPPI BAND OF CHOCTAW:

The Choctaw reservation comprises 22,000 acres of trust land, consisting of seven communities scattered over a 5-county area. The largest community, Pearl River, with a population of approximately 3,000 of the total Choctaw membership of 8,200, is the seat of tribal government and is located in Neshoba County, just west of the town of Philadelphia. The other communities are: Bogue Chitto (Big Creek) and Tucker in Neshoba County; Red Water and Standing Pine in Leake County; Conehatta (Pale Skunk) in Newton County; Crystal Ridge in Winston County and Bogue Homa (Red Creek) in Jones County.

Comparisons were made with selected data from the statewide 1995 Mississippi BRFSS telephone survey. To make the comparisons valid they were limited to BRFSS respondents in the "rural" counties of the state. These were defined as all counties in Mississippi, except Desoto, Forest, Hancock,

Harrison, Hinds, Jackson, Lauderdale, Lee and Rankin Counties, which are counties with large towns or cities.

PASSAMAQUODDY PLEASANT POINT TRIBE OF MAINE:

In 1995, the Passamaquoddy Pleasant Point tribe of Maine and the IHS Nashville Area Office agreed that a BRFS would be carried out among members of the tribe. Included in the surveyed population would be those living in the vicinity of the Pleasant Point reservation (located at the eastern end of Maine near the town of Perry) and those living elsewhere in the southern half of Washington County. (This was defined as those living south of State Route 9, which runs in an east-west direction and approximately divides the county into northern and southern halves.)

Where possible, results were compared to data for the state of Maine gathered in the 1993 statewide Behavioral Risk Factor Survey. Additional comparisons were made with the 1992 Health Interview Survey and the 1990 National Survey Of Family Growth, both nationwide surveys. A few of these comparisons are highlighted in this summary.

ST. REGIS TRIBE OF NEW YORK:

In 1995, the St. Regis Mohawk tribe of New York State and the IHS Nashville Area Office agreed to carry out a Health Assessment Survey among tribal members. Included would be those members living on the St. Regis Mohawk reservation and in nearby towns. The reservation is located at Hogansburg, New York, which is in the northwest corner of Franklin County, on the St. Lawrence River at the point where New York state

and the Canadian provinces of Ontario and Quebec meet. The nearby towns included in the survey area were Massena, Roselvetown, Fort Covington, Bombay, Moira, Norfolk and Malone, New York, as well as Chenail (Snye) and St. Regis, Quebec, and Cornwall Island, Ontario. The Mohawk reservation straddles the border between Canada and the United States. Although tribal members may freely reside on either side, there are separate tribal governments for the US and Canadian portions of the reservation and members are on the enrollment list of either one tribal government or the other. Thus, while some of this survey's respondents may be residing in nearby Canada, they are members of the "American" part of the Mohawk tribe and were selected from that enrollment list.

Comparisons were made with selected data from the statewide 1993 New York BRFSS telephone survey. To make the comparisons valid they were limited to BRFSS respondents in 43 counties north of the New York city area which have no large cities. Additional comparisons related to contraceptive method use were made on a nation-wide basis with the 1990 Re-Interview Survey of the 1988 National Survey Of Family Growth.

METHODOLOGY

Survey design

All three Health Assessment Surveys were designed to include a representative sample of tribal members, 18 years of age and older, living on their respective reservations in Mississippi, Maine and New York. Face-to-face household interviewing was used. The Survey Coordinators were experienced with surveys, while the interviews were conducted by tribal members hired as interviewers for the duration of the survey. Most of the interviewers had previously worked on other Surveys. The survey staff participated in a four-day orientation session immediately before the start of field work. Interviews generally took four-six months.

The primary sampling frame for selection of respondents was the IHS Service Unit Patient Register. Since the survey was designed to collect information from an unbiased sample of all adult tribal members living in the survey area, it was important for the sample to be chosen from a relatively complete listing of the eligible population.

MISSISSIPPI BAND OF CHOCTAW:

There were 2,162 male and 2,300 female tribal members on the patient register list 18 years of age or older with addresses in the survey area. An initial review of the list determined that 45 males and 60 females had subsequently moved out of the survey area, and that 39 males and 11 females were

deceased. This left 2,084 males and 2,229 females available for selection. A 20% sample was selected, using a random start and taking every fifth name, resulting in 863 names. Interviewing began in September 1995 and after some minor delays was concluded in June 1996.

The distribution of the final interview status of those 863 individuals, of whom 605 or 70.1%, were successfully interviewed, a satisfactory rate of completion. Because they were temporarily absent and/or were not found at home after repeated visits, 176 persons were not interviewed. A further 77 individuals, or 8.9%, a typical percentage for this type of survey, refused to be interviewed. Of the remaining 5 individuals, 4 were not interviewed for miscellaneous reasons and 1 was hearing impaired. **PASSAMAQUODDY PLEASANT POINT**

TRIBE OF MAINE:

The Passamaquoddy Pleasant Point Health Assessment Survey was designed to include all tribal members, 18 years of age and older, living in the defined survey area of south-eastern Maine. Face-to-face household interviewing was used. Interviews were conducted by tribal members, hired for the duration of the survey. The survey field staff participated in a four-day training course immediately before the start of field work. Interviewing began in July 1995 and after some minor delays was concluded in March, 1996.

The primary sampling frame for selection of respondents was the tribal enrollment list. Since the survey was designed to collect

information from all adult tribal members living in the survey area, it was important that they be chosen was from a relatively complete listing of the eligible population. From this list, 471 respondents were selected for interview. Of these people, 25 refused to be interviewed and 10 could not be found. The remaining 436 were interviewed. Interviews were completed with 192 men and 244 women.

ST. REGIS TRIBE OF NEW YORK:

The St. Regis Mohawk Health Assessment Survey was designed to include a representative sample of tribal members, 18 years of age and older, living on or near the Mohawk reservation in northern New York State. Face-to-face household interviewing was used. Interviews were conducted by tribal members hired as interviewers for the duration of the survey. The survey coordinator was an employee of the health department. The survey field staff participated in a four-day training course immediately before the start of field work. Interviewing began in September 1995 and after some minor delays was concluded in June, 1996.

The primary sampling frame for selection of respondents was the tribal enrollment list. Since the survey was designed to collect information from an unbiased sample of all adult tribal members living in the survey area, it was important for the sample to be chosen was from a relatively complete listing of the eligible population. There were 3180 tribal members on

the tribal enrollment list 18 years of age or older with addresses in the survey area. A 25% sample was selected, using a random start and taking every fourth name, resulting in 795 names. For various reasons, including permanent absence (military, education, employment elsewhere, prison, etc.), deaths and recent change of residence, 342 names were removed from the sample list and 453 respondents were selected for interview. Of these, 34 refused to be interviewed, 11 could never be found at home or were temporarily absent when the survey ended and 4 were hearing impaired or incompetent. Of the 453 individuals surveyed, 404 or 89.2%, were successfully interviewed, a satisfactory rate of completion, while only 7.5% refused.

Survey Content

Since 1981, many state health departments, with technical assistance from the Centers for Disease Control and Prevention, have been using Behavioral Risk Factor Surveillance Surveys (BRFSS) to collect information on various health-related behaviors among state residents (Marks et al., 1985). These surveys have permitted states to estimate the prevalence of important health behaviors using relatively low cost telephone survey methodology. Among the behaviors covered in those surveys are tobacco use, alcohol consumption, weight and diet, physical activity, blood pressure control, and seat belt usage.

The Health Assessment Surveys included all of the above topics and several others considered by tribal leaders and the Indian Health Service to be important health concerns among Indian people. (Some of these topics are now included in the Statewide surveys.) These additional topics included: consumption of specific Native American foods, drug use, injury prevention, maternal and child health, family planning, health care utilization, stress, and knowledge about AIDS prevention.

FINDINGS

SMOKING: Cigarette smoking is the leading cause of preventable death in the United States (Public Health Service, 1989). Smoking has been shown to substantially increase rates of premature death from cancer, coronary disease, and stroke. Prior to this survey there were no population-based survey data available on the prevalence of smoking among USET tribal members.

Approximately fifty percent of men and twenty-five percent of women currently smoke cigarettes. This level of current smoking for men is almost twice as high as the 1995 rates for non-Native men while the percentage of Indian women who currently smoke is almost identical with the percentage of non-Native women and U.S. women as a whole who smoke (Centers for Disease Control and Prevention, 1994). For both sexes, smoking prevalence was lowest among the oldest respondents.

Although not specifically shown, subtracting the percentage of respondents who currently smoke from those who have ever smoked yields the proportion of ever-smokers who gave up cigarettes. The percentage of ever-smokers who have quit is highest for both men and women at least 55 years old, probably a result of a longer possible time to quit among older people and higher mortality among smokers than non-smokers.

SMOKELESS TOBACCO: Long-term use of smokeless tobacco

may increase the risk of developing oral cancer and periodontal disease (Public Health Service, 1986). Since smokeless tobacco contains nicotine, it may also help contribute to tobacco addiction among young users. Studies have revealed widespread use of smokeless tobacco in several American Indian populations, particularly in adolescents (Centers for Disease Control, 1988a), including one survey looking specifically at adolescents in the Pacific Northwest (Hall and Dexter, 1988).

Surprisingly, more women interviewed in this survey reported they currently used smokeless tobacco than men. In almost no other Native American population studied has the prevalence of smokeless tobacco use by women been as high as among women. Among both men and women prevalence was highest among those with less education. Male respondents and more than half of women began using these products before age 15.

On the other hand, as was the case with smoking cigarettes, relatively few respondents used these products heavily. Two-thirds of male smokeless tobacco users and 80% of female users only used one can or pouch per week.

Most respondents had been counseled by a health professional on the risks of tobacco use. Four out of five respondents believe that the use of smokeless tobacco is harmful to one's health.

HEALTH STATUS: Respondents' perception of their general

health status has been shown to be a good indicator of their actual health status (Idler, 1993). Almost half of the Native American respondents feel that, in general, their health is only fair or poor. As might be expected, this percentage increases with age and is higher among less well educated people and those who live in households where the annual income is less than \$15,000. This question was phrased in an identical manner in the statewide BRFS telephone survey, but the level of perceived poor health in the Native American population is almost twice as high as in the general population. This difference between the two populations exists across sub-groups examined, except those in households whose income is less than \$15,000 per year. Analysis of the data on specific health conditions later in this report will shed light on the extent to which this perception has a basis in fact.

CARDIOVASCULAR DISEASE/HIGH BLOOD PRESSURE/CHOLESTEROL:

Among Native Americans (as among all Americans), cardiovascular disease is the leading cause of death (Indian Health Service, 1994). High blood pressure or hypertension is a condition that greatly increases the risk of coronary heart disease and strokes and contributes to diseases of the kidneys. Hypertension may begin early in life, with the risk progressively increasing with age. Because the symptoms of hypertension are often not apparent to the victim, it is

important that people have their blood pressure checked routinely. For respondents aged 35 and older, the proportion respondents who reported having their blood pressure checked in the previous 12 months is high, more than eighty percent. However, the data for State respondents is slightly higher.

Overall, twenty percent of respondents stated that they had been told at least twice that they were hypertensive. This percentage increases with age and is similar to the corresponding level found in state-wide BRFSS's.

About two-thirds of men and women are supposed to be treating their high blood pressure with medication. Of those, more than three-fourths took their medication the day before the interview and four out of five report their high blood pressure is under control.

Clinical evidence has shown that increased levels of low density lipoprotein or LDL-cholesterol are causally related to an increased risk of heart disease, and risk of heart disease rises progressively with cholesterol level, particularly when cholesterol levels rise above 200 mg/dl. There is also substantial clinical evidence that lowering total LDL-cholesterol levels reduces the incidence of heart disease.

Almost half of men and women reported that they had **never** had their cholesterol measured and about one-fourth of men and women did not know if it had ever been measured. Another one-fourth of men and women said that their cholesterol had been

measured within the past year. These figures are less favorable than those from the state BRFSS's.

Less than 10% of men and less than five percent of women reported that they had been told that their cholesterol level was too high, which was about one-third the level of State BRFSS respondents. The percentage of male respondents with high cholesterol shows no particular pattern according to population sub-group, except that it is higher among better educated people. More than four of five respondents have been told by a doctor or nurse how to lower their cholesterol level (data not shown).

IMMUNIZATIONS: Respondents were asked about three adult immunizations--tetanus, influenza and pneumococcus. It is recommended that tetanus toxoid boosters be given every ten years to maintain adequate immunity. Sixty-six percent of respondents reported receiving a tetanus booster within the last ten years, but this figure was much lower for people in the oldest age group. Since tetanus boosters are often administered after trauma or in conjunction with treatment for other medical conditions, some people may have been unsure about their tetanus booster status or confuse another injection with a tetanus booster.

Influenza and pneumococcal vaccines are recommended for adults 65 and older and for people with certain chronic diseases. While this survey shows that these vaccines were

administered to people in all age groups, the highest percentage receiving them was among those 45 and older: about half had received a flu vaccination in the previous year, but only twenty percent had received a pneumococcus vaccination at some point in their lifetime.

EXERCISE: Moderate exercise performed on a regular basis is a positive lifestyle behavior which can help to prevent or alleviate obesity, cardiovascular disease, hypertension, diabetes, musculoskeletal problems, respiratory diseases, stress, depression, and anxiety (U.S. Department of Health and Human Services, 1996). Survey respondents were asked the type of exercise they did most often and the frequency of these activities.

Those who did not typically engage in vigorous leisure time physical activity at least three times per week for at least 20 minutes were defined as sedentary and, therefore, at increased risk for certain adverse health conditions. Three-fourths of men and eighty percent of women were classified as sedentary according to this definition and there is little variation by sub-group.

Among those people who exercised, the most common type of exercise, by far, was vigorous walking, which was the primary form of exercise for at least half of men and women who reported exercising.

The most common reason for not exercising, which was

stated by almost more than one-third of men and women, was lack of time. Another one-fourth said they were not motivated, though a similar percentage of people said they were physically unable to exercise. Presumably health education efforts could persuade those in the first group to find forms of exercise which are not time consuming, such as jogging for short distances, while those in the second group could learn to overcome their lack of motivation.

DISABILITIES: Respondents were also asked whether a disability prevented them from working at a job, working around the house or attending school. About 1 in 7 respondents reported they were completely unable to carry out these activities (fully disabled) and 1 in 50 that they were unable to do certain activities (partially disabled). The figures appear to be relatively high. The percentage reporting full disability increased dramatically with age and was highest at the lowest levels of education and income. There was little variation in percentages of partial disability according to sub-group, except that it was highest among the oldest respondents.

The types of disabilities reported by disabled respondents. Included thirty-two percent reporting they suffered from a physical handicap and more than twenty percent reported that they had an injury or accident. Approximately fifteen percent reported a stroke, heart attack, alcohol, drug

or mental health problem.

Respondents were further asked whether they had trouble walking uphill or climbing stairs for health reasons. Thirteen percent of men and about twenty percent of women reported this to be the case. This percentage, as might be expected, increases dramatically with age from less than 5% of those under the age of 25 to almost half of respondents over the age of 54. The proportion of respondents with this problem was also twice as high among respondents whose household income is less than \$15,000 per year.

WEIGHT: The Body Mass Index ($BMI = \text{weight in kilograms} / \text{height in meters}^2$) is an effective means to determine whether an individual is substantially overweight (Centers for Disease Control, 1986). Females with a BMI of 27.3 or greater and males with a BMI of 27.8 or greater are classified as overweight.

Based on self-reported weight and height more than two-thirds of all respondents were classified as overweight. The prevalence of being overweight among Native American tribal members is approximately twice the percentage for the general population in almost all age and socio-economic categories. The proportion of tribal members who are overweight increases somewhat into the middle-age groups and decreases slightly in the oldest age group.

More than 40% of overweight men and women reported that

they have been advised by a health professional to lose weight and that most (57% of men, 66% of women) were trying to lose weight at the time they were interviewed. However, the survey also showed that approximately one-fourth of men and women who were trying to lose weight reported that they were neither eating less nor increasing their physical activity, to achieve this goal. About one-third, reportedly, were both eating less and exercising to lose weight.

DIET/NUTRITION: A diet high in fat has been shown to be a risk factor for heart disease, some cancers and being overweight, which can contribute to diabetes and other chronic conditions. Consequently, survey respondents were asked a series of questions on how often they typically ate certain high-fat foods. These included various meat products, dairy products, eggs and pastries. Respondents were also asked how often they ate food not prepared at home; i.e., food obtained from restaurants, take-out establishments and TV dinners. A question was also asked on the consumption of non-diet soft drinks with a high sugar content.

Questions were asked concerning the reported frequency of consumption of high fat foods and sugar-sweetened soft drinks. In general, women reported consuming these types of food less often than men. Almost half of men and almost one-third of women consume butter and margarine on a daily basis, while well over seventy-five percent of men and women drink non-diet

soft drinks at least 3 times per week. Over two-thirds of men and more than half of women report they eat fried foods more than three times per week. About one-third of men and women report that they eat frozen dinners at least three times per week, though another one-third report they never eat these. Almost half of all respondents reported consuming hamburger and beef products at least 3 times per week.

Almost half of all men and more than twenty-five percent of women report they consume five or more servings of the fatty foods per day. The consumption of five or more servings of fatty foods decreases with increased age among men, but not among women.

The United States Department of Agriculture currently recommends that individuals eat five or more servings of fresh fruits and vegetables each day. Less than ten percent of survey respondents reported consuming enough fruits and vegetables to meet this recommendation. In addition, about twenty-five of all respondents report that they almost never consume fruits and vegetables.

DIABETES: Diabetes is a serious health problem among Native Americans in general. In the period 1989-1991, the age-adjusted mortality rate from diabetes was 2.5 times greater among American Indians and Alaska Natives than for the white population of the U.S. (Indian Health Service, 1994). In 1990, it was the third leading reason for IHS outpatient

visits (behind respiratory problems and otitis media). In light of the relatively high proportion of the population who are overweight and the high prevalence of diabetes in Native Americans generally, it would not be surprising to find diabetes to be relatively widespread in the survey population.

It is recommended that individuals considered to be at high risk for diabetes (people who are markedly obese, have a family history of diabetes, or have a history of gestational diabetes) be screened for diabetes (U.S. Preventive Services Task Force, 1989). This is especially important from about age 40, when the probability of developing diabetes increases.

Almost half of men and two-thirds of women reported being tested for diabetes in the previous five years. As would be expected, the proportion tested increases with age. Also, in almost all segments of the population higher percentages of women than men reported being tested. It is somewhat encouraging that individuals who are overweight or who have a family history of diabetes were more likely to have been tested recently than were others.

One-fourth of men and one-third of women reported having been told they had diabetes. Like most populations, there is a higher prevalence of diabetes among women than men. However, besides being much higher than the corresponding

percentages for the general population, the percentages are higher than most other Native American populations studied. The percentage of the population reporting diabetes increases with age and is also higher for people with a family history of diabetes and who are overweight.

Not shown in a Chart is that among women of childbearing age who have been pregnant at least once, about one in four have been told at some point that they developed diabetes during pregnancy. This is known as gestational diabetes, which may disappear after pregnancy.

More than eighty percent of known diabetics are taking insulin or oral medicine to control their diabetes, with twice as many taking oral medicine than insulin. These percentages are similar for men and women, but three times as many diabetics under the age of 35 are not controlling their diabetes with either remedy. Eighty percent of men and women correctly took their medicine the day before the interview, though again this percentage was much lower for younger people under the age of 35.

When asked how an individual might reduce his or her risk of becoming diabetic, only about one-half of the respondents mentioned either diet control or exercise, which are the best means of reducing one's risk.

ALCOHOL/DRUG ABUSE: Many direct and indirect health effects of alcohol abuse have been documented. Among the

direct effects are damage to the nervous system, the liver, the esophagus and pharynx, and other organs. Alcohol consumption is the primary risk factor associated with motor vehicle accidents and injuries, and is often a contributing factor to other types of accidents and violence and, thus, is frequently an indirect cause of injury, disability, and death. In addition to physical effects, alcohol abuse also can bring about or contribute to profound familial, social, emotional, and economic problems.

In general, mortality attributed to alcohol is much higher for Native Americans than for the United States population as a whole. Among Native Americans the age adjusted mortality rates for chronic liver disease and cirrhosis are 3.5 times higher than the national rate and for motor vehicle accidents are 2.6 times higher than the national rate (Indian Health Service, 1994). However, there are few data for specific Indian populations describing patterns of alcohol consumption. This survey allows examination of reported patterns of alcohol use among the three USET Tribes and comparison with the general.

Three-fourths of respondents reported having at least 12 alcoholic drinks during their lifetime (data not shown). About two-thirds of men under the age of 35, as well as most older men reported that they started drinking before the age of 17. Almost sixty of women under the age of 35 reported

they had begun consuming alcohol before the age of seventeen, compared to only one-third of older women, indicating that the trend among women is to begin drinking at earlier ages. More than one-third of men under the age of 35 started drinking before they were 15 years old.

Using responses to a question on whether individuals had consumed any alcoholic beverages in the past month as an indicator of current alcohol use, it was found that male survey respondents were approximately ten percent more likely to be currently drinking than the non-Indian male population in general, while roughly similar proportions of Indian women and non-Indian women currently drink. Among both males and females in this survey, the proportion of current drinkers was lowest in the oldest age group and among those with greater income.

Any respondent who reported having five or more drinks on at least one occasion during the previous month was defined as exhibiting acute alcohol use. Among Survey respondents, approximately forty percent of the men and but less than ten percent of women fell into this category. The percentages for State Surveys were much lower for men and women. The reported prevalence of acute alcohol use among both sexes is lower among those over 54 years old and among men in the lower education categories than in the younger and better educated categories.

This survey also allowed estimation of proportions exhibiting chronic alcohol use, defined as having an average of two or more alcoholic drinks per day. The overall results showed greater levels of chronic drinking among Native men than among men in the general population. (Chronic drinking was negligible among both Indian women and non-Indian women.) About ten percent of Indian males were classified as chronic drinkers, compared to less than five percent of non-Indian men. Unlike acute drinking, the percentage of men who chronically drink is higher in the lower education categories. The few Indian women who chronically drink are under the age of 35.

Another way of looking at the prevalence of acute alcohol consumption is to examine the usual state of individuals after they have been drinking. About twenty percent of Native American men and about ten percent of Native American women reported that when they drank, they usually drank enough to become drunk or to pass out. These percentages are higher in the lower education categories.

Twelve percent of men and less than ten percent of women reported that they had driven after having had "perhaps too much too drink" at least once in the past month. These figures are much higher for both sexes than the general population in every sub-group examined.

Questions were included on the Survey which compared the

proportion of men and women who rode with another driver during the past month who had too much to drink, and with those who had done either (driven drunk themselves or ridden with another). The percentage who had done either demonstrates those whose behavior puts them at risk because of drinking and driving, and suggests that the overall health risk caused by drinking and driving is much greater than the Charts alone implies. The above figures rise to more than a quarter of men and more than twenty percent of women under the age of 45, indicating the safety of far more people than those who drive after drinking is being jeopardized by the use of alcohol.

The overall picture of alcohol use by tribal members is mixed. The reported percentages of current drinking for both sexes are about the same as the general population. However, of those respondents who drink, reported level of acute and chronic drinking are much higher than reported levels among the general population. Other concerns are the greater proportion of Indian people who report they drive after consuming alcohol and the general willingness to ride with drivers who have been drinking compared to the general population. Since under-reporting of drinking is possible in any survey, all the behaviors discussed may be more prevalent than suggested in both the USET and the State surveys.

Use of psychotropic drugs is a controversial topic with

medical, legal, and philosophical components that society has had difficulty resolving (Nadelman, 1989). The survey revealed that marijuana and inhalants are the only illegal drugs reportedly used by Tribal members to any great extent, and that use is largely by men. About ten percent of men reported they used marijuana in the past year, which is more than four times the proportion reported by women. Six percent of men reported using inhalants in the past year. Only one percent of men and few women reported recent use of "crack". Since self-reports of the use of illicit drugs is almost certainly under-reported to some extent, the figures presented can be viewed as a lower limit of the true prevalence of use.

Regarding prescription drugs, relatively few men or women reported using diet pills or tranquilizers. Much of this use was almost certainly prescribed or legal over-the-counter preparations.

There was a sharp difference between men over and under 25 years of age in recent use of marijuana, with less than ten percent of male respondents over age 25 reporting use in the last year, but almost one-fifth of younger men doing so. A similar pattern is seen among women, even though the level of use was much lower. There was a similar pattern for use of inhalants.

Comparisons were made of the four levels of drug or alcohol use and driving. Without specifying who was driving,

more than one-third of men and but less than 10 percent of women had ever been in an accident "involving drugs and/or alcohol". In addition, approximately ten percent of men and women had been in such an accident during the past year. Also, more than one-fourth of men and about 10% of women have had their driver's license suspended because of alcohol or drug use, which would indicate that a substantial proportion of the accidents reported may have been due to the respondents' own use of drugs and/or alcohol. On the other hand less than one percent of respondents reported having driven one or more times in the past month after having used drugs (data not shown).

INJURY PREVENTION: In 1994, mortality from automobile accidents was 2.6 times higher among Native Americans nationally than among Americans as a whole. Likewise, mortality from other types of accidents was 2.7 times higher among Indians than for the entire United States. Information was gathered on various injury-related behaviors related to motor vehicle accidents, as well as seat belt use, bicycle safety helmets and the presence of smoke detectors.

The Questionnaire surveyed the respondents' involvement in car accidents in general. Almost one-fourth of both men and women had been in a car accident in the past five years, with higher proportions of younger people having been in an accident than older people. More than half of those

respondents who had been in an accident, or approximately fifteen percent of all respondents, were driving when these accidents took place, with this percentage also decreasing with greater age. Eleven percent of respondents had been in an accident in which someone else or they themselves were injured.

Less than one-third of Native American men and women said that they always or nearly always wear seat belts when riding in a motor vehicle. These results were less than half the corresponding percentages for State residents.

The Questionnaire also surveyed the results of the failure to use seat belts regularly according to respondents' characteristics. Failure to use a seat belt is higher among people in the lower education and income categories.

Among the approximately one-third of respondents with a child under four living in the household, almost half reported failure to regularly use a child safety seat when driving. Rates of non-use were higher among those with less education and among those in the lower family income category (less than \$15,000).

Among the respondents with one or more family members who regularly roller blade, skateboard, ride a bicycle or go-kart, regular use of a safety helmet was reported by about fifteen percent.

Almost 80% of respondents reported that there was at

least one smoke detector in their home. The percentage was lower among respondents over the age of 54. However, among those with smoke detectors, only half reported that the device had been tested within the past year.

Since the Choctaw reservation is in a rural area, and the two northern Tribes in Maine and New York are also rural sites, the danger of accidents due to the use of both 3-wheel and 4-wheel All Terrain Vehicles (ATVs), tractors, fishing boats, as well as motorcycles can be a problem. Though less than ten percent of respondents report that they regularly use any of this type of equipment (data not shown), eleven percent of men and more than five percent of women said that they have been injured in an accident on one of these machines. The percentage was highest among respondents aged 35 and over, those in the higher education and income categories and, as might be expected, among those who regularly ride this type of equipment. It is significant that even among those people who do not use these machines regularly, approximately 10 percent of the occasional user has been injured on one of them.

Twenty-six percent of men and women said that there was at least one gun of any kind kept in their home. Seventy-three percent of men and more than eighty percent of women with a gun at home said that they had not taken a course in gun safety. More than half of men and women with a gun at home said that the gun or guns were left unlocked and a little

less than ten percent of men and women reported that the gun or guns were kept loaded.

MATERNAL AND CHILD HEALTH: The female respondents aged 18-44, who had given birth since January, 1990, were asked about cigarette smoking and alcohol consumption during their most recent pregnancy. On an average, about forty percent of them reported that they smoked during their last pregnancy. Despite this relatively high smoking prevalence during pregnancy, most of these women did not smoke heavily. The incidence of smoking while pregnant was highest at fifty percent of Passamaquoddy women that continued to smoke during pregnancy, while less than twenty percent of the Choctaw and St. Regis continued to smoke while pregnant.

Eighty-eight percent of women aged 18-44 who had given birth since January, 1990 reported that they had not drunk any alcohol during their most recent pregnancy. Of those who reported drinking alcohol, the frequency of consumption was low; only 2% reported that they drank more than once per week.

Women who had given birth in the five years leading up to the survey were asked about the planning status of their most recent pregnancy, i.e., whether they had intended to become pregnant at the time they did. Statistics reveal a wide disparity among the three Tribes. It is safe to state that most pregnancies are unplanned. Among Passamaquoddy women only approximately twenty percent of pregnancies are planned,

about half of all pregnancies are planned at St. Regis, and seventy percent of all Choctaw pregnancies are planned. Most recent pregnancies were classified as mistimed (i.e., the mothers became pregnant earlier than they would have liked) and many pregnancies were unwanted (i.e., the respondent already had as many children as she wanted and desired no more). Eleven percent of these women were not able to categorize the pregnancy.

Almost all women of the three Tribes reported receiving prenatal care during their most recent pregnancy, and almost two-thirds made 10 or more visits for prenatal care. Seventy-nine percent of women who gave birth in the previous five years began receiving prenatal care during the first trimester of their pregnancy. Nevertheless, five percent of the last born infants were of low birth-weight; i.e., less than 2500 grams or about 5.5 pounds.

Breastfeeding is recommended because of proven health and nutrition benefits for the infant. However, only less than fifteen percent of women who gave birth during the previous five years breastfed their most recently born child. Ninety-two percent of mothers reported that their most recently born child had received a medical checkup before he or she was four months old.

Women between 18 and 44 years of age and all men were asked a series of questions concerning the use of methods to

avoid pregnancy and prevent sexually transmitted diseases.

Overall, approximately half of all women aged 18-44 were using some method of family planning at the time of interview. However, in State BRFSS's more than seventy percent of all women of child bearing age are using some type of contraceptive method. Female sterilization (tubal ligation) was the most prevalent method of family planning among survey respondents, used by almost one-third of women, with the contraceptive injection in a distant second place at five percent, followed by oral contraceptives (the pill) and Norplant. Less than one percent of women and their partners used condoms.

As might be expected, the type of contraceptive method used differed by age. Fewer women under the age of 30 had completed their families, so relatively few, had been sterilized, while many women 30-44 years had been sterilized. On the other hand about ten percent of the women in the younger age group were using the injection, compared to only 2% in the older age group. Most Indian women (30 years and older) were sterilized and many fewer had partners who had a vasectomy.

The major reason reported for not using a contraceptive method by women in this group was that they were not sexually active (45%), followed by 19% who stated they were unable to get pregnant and 14% who wanted to get pregnant.

Less than twenty-five percent of men reported that they used condoms on at least some occasions and an average of one-fourth of the men stated that they always used condoms. Many more men always used condoms if they were younger, not married and in the higher education categories.

CANCER: Available data suggest that American Indian women have a higher risk of developing cervical cancer than the general population of the United States, but a lower risk of developing breast cancer (Justice, 1988). Since screening programs can detect these cancers, as well as colo-rectal cancer, early enough to reduce mortality, it is important to measure how many people take advantage of these voluntary programs.

The Indian Health Service has stressed the use of Pap smears as a means of early detection of cervical cancer among women 18 years of age and older. More than ninety percent of the female respondents in the survey reported having a Pap smear at some point in their lifetime and more than half had one in the past year. These percentages were similar to those for State respondents. Younger women and those in the higher income category were more likely than others to have had a Pap smear in the past year.

About sixty percent of women over the age of 40 reported having a mammogram in the past year, which is about half the percentage of non-Indian women. Indian women in the higher

education and income categories are more likely to have had a mammogram in the past year.

Approximately fifty percent of Indian women reported having a breast exam by a clinician in the past year, which is slightly less than the proportion of non-Indian women who have done so. Ten percent of Indian women reported **never** having had a breast exam by a clinician.

While about three-fourths of Indian women had been taught to do a monthly self-examination for breast lumps, less than half of women report doing so. Performing a monthly breast self-exam is related somewhat to education level. Eight percent of women had found a suspicious lump requiring a visit to a health professional.

The survey asked all men and women over the age of 40 the length of time since their last rectal exam for cancer. Thirty percent of tribal members in this age group received an exam in the previous two years. This percentage is lower than by about fifty percent of people over 40 in the general population of who have had a rectal exam in the past two years. However, approximately forty percent of Native American respondents between the ages of 40 and 59 had **never** had a rectal exam.

HEALTH CARE UTILIZATION: Health Care Utilization questions in the Assessment Survey included questions on respondents' preferred means of learning about health and

medical care, their usual source of non-emergency medical care, their recent use of tribal and other medical and dental facilities serving Native Americans in their area, and opinions about the services provided at these facilities. These data provide useful information for tribal leaders and health care managers regarding health care utilization. In addition, by ascertaining the proportion of respondents utilizing tribal and other facilities, and what types of people are the most and least likely to use them, enables us to estimate how well health behaviors and conditions might be measured through clinic-based monitoring.

More than half of male respondents and almost two-thirds of female respondents reported they prefer to learn about health and medical care by talking with a service provider. Less than twenty percent said they would prefer audio-visual or printed material.

The majority of Indian men and women reported that their preferred source of *health care advice* was the Tribal Health Centers. Less than 2% of respondents preferred private medical facilities for this type of advice.

An even higher percentage, almost ninety percent, reported that their preferred source of non-emergency health care was the tribal Health Center or one of the other tribal clinics. Less than 1% of men and 3% of women preferred a private doctor or clinic for non-emergency care.

Only a small percentage of male and female survey respondents had not used the Tribal Health Center for medical care in the past year. The health center was used least by younger respondents. Among those who have used the medical facilities of the health center in the past year, about half think the services provided are good.

Among non-users of these services, the most commonly cited reason for non-use, stated by more than sixty percent of them, was that they had not needed medical services. A total of less than ten percent of respondents said their reason for not using these services was either too long a long waiting time, inconvenient hours or poor quality of care.

Less than ten percent of respondents had not used the Tribal Health Center Pharmacy during the past year. These percentages are highest among younger people. As with medical care, the major reason respondents gave for not using these services, stated by two-thirds of them, was that they had not needed to use the pharmacy in the past year. Less than ten percent of respondents said their reason for not using these services was either too long a long waiting time, inconvenient hours or poor quality of care.

Almost half of survey respondents had gone to a dentist during the past year. These percentages are slightly higher among those in the higher education and income categories. Of those who had gone to the dentist, over ninety percent of both

men and women had used the Tribal Health Center dental facilities. Among those who had used dental facilities in the past year, more than half of men and women thought that the services provided were good.

As with the pharmacy, the major reason respondents gave for not using dental services, was that they had not needed dental services in the past year. A total of less than ten percent of men and women said their reason for not using these services was either too long a waiting time, inconvenient hours or poor quality of service.

HIV/AIDS/STD'S: All respondents were read a list of hypothetical ways in which HIV/AIDS can be transmitted and asked whether, as far as they knew, AIDS could, indeed, be transmitted by these means. The results show that over eighty percent of respondents knew that a person could be infected by having sexual intercourse with a person infected with AIDS, sharing needles and at birth, if the mother was infected. However, half of respondents thought, incorrectly, that donating or giving blood is a means of AIDS transmission and about a fourth thought being sneezed or coughed on by a person infected with AIDS could cause transmission.

About three-fourths of respondents reported that the tribal Health Center or one of the other tribal clinics was their preferred source of additional information on AIDS.

Correctly using condoms during sexual intercourse is an

effective means of preventing STD infection (including HIV). All respondents were asked whether they felt the use of condoms could prevent a person from getting AIDS or other STDs. Only one-third of the respondents felt that condoms were totally effective in preventing AIDS and other sexually transmitted diseases. In addition, one-fifth of men and women said that condoms are sometimes effective, but not 100% reliable. Approximately twenty percent of men and women felt condoms were not effective and over twenty percent said they did not know if they were effective or not.

STRESS: Psychological and emotional stress can be important factors in the development of chronic diseases and mental illness (Somervell et al., 1989; Goldberg, 1976). The three surveys included several questions about support during stress, possible indicators of stress and the occurrence of stressful life events. Less than twenty-five percent of men, but more than forty percent of women said they would turn to their family for support in times of stress, while about twenty percent of respondents of both genders would turn to friends in such situations. Less than twenty percent of respondents of both genders said they would turn to their spouse or partner at such times and only about ten percent would turn to a minister or priest.

Eight percent of men and more than ten percent of women reported that they had serious problems getting along with

their spouse or partner. Less than five percent of men, but more than ten percent of women said they had trouble getting along with their children.

Approximately the same proportions of males and females (about two percent) reported that they experienced at least one major misfortune in the past year. These percentages increased with age. About ten percent men and women reported that the loss was a death of someone close and about ten percent of men and women reported a serious illness or injury to themselves.

When asked what proportion of the time they felt depressed or downhearted, about ten percent of both men women reported all or most of the time. More than half of both men and women said this occurred rarely or never.

ABUSE/NEGLECT: About six percent of men and ten percent of women reported that they were abused as children. Similar percentages of men and women, less than five percent, respectively, said this consisted of emotional neglect or abuse, and less than five percent of men and women said it was physical abuse. Four times as many women as men, reported they were sexually abused as children. Some respondents refused to say what type of abuse they were subjected to as children.

CONCLUSION

The Impact of Health Programs on Behavior among Three United South and Eastern Tribes

The purpose of health education, health promotion and disease prevention is to change behavior. As is evidenced by the behaviors in this survey, Tribal health programs need to moved to change the direction and the focus of the provision of services within the Indian Health Service and within Tribal Health Programs.

During it's infancy the IHS realized early that the health of Native People was a many faceted concept. In its adoption of Public Health Practice, the IHS developed a two-pronged approach to health. The first approach was the development of an infrastructure and system for providing Health Care Services - a method to supply, equip, and man health stations, clinics, and hospitals throughout Indian Country. Today we see the result of this first concept, the IHS provides health care to Indian People throughout the contiguous United States and Alaska. The second concept was to develop the "public health approach." This involved the use of non-medical personnel whose responsibility was to activate, motivate, and eventually mobilize Indian Communities to voice their community health concerns as well as organize and bring resources to bear on community needs. To many "old timers" it doesn't seem very long ago that many, if not all, Indian Communities did not have running water, sewer or septic systems, electricity, or even paved roads.

Simultaneously, many of the diseases that were impacting the

health and welfare of the communities existed because of environmental conditions. Thus, the focus of "public health" was to concentrate on the environment to begin an effort to manipulate the physical conditions that were cause for the continuing disease trends. While the effort to change the environment moved, it was also realized that this was only one half the equation. The other half was to motivate the community to "change" itself.

In order to combat disease, the individual, that individual's family, and the society in which the family lived, needed to become aware of the factors that made for illness, both in terms of the environment and in terms of *behavior*. Once the factors became understood, the individual, the family or the whole community could then *mobilize* themselves to move to action or find the resources to begin progress towards removing disease or social conditions.

Thus Public Health Education was introduced. Public Health Education includes:

- a. helping the communities become aware of the physical and social conditions that were leading them to become ill;
- b. educating individuals and families on health practices;
- c. facilitating alternative actions;
- d. Mobilizing community action groups to voice concerns;
- e. Helping communities participate as consumers in partnership with IHS;
- f. Structure health information within the health care system and the community, and;

g. Advocate to the IHS and other resource groups on behalf of Native American communities for resources to improve the social and economic conditions of Native Americans.

Today, much of what exists in Indian Communities was initiated by Public Health Education. Electricity, HUD Housing, food surplus programs, and even the introduction of the Save the Child Federation was the result of the efforts, in part, by public health educators and the practice of Public Health Education. Time has dimmed the recognition of Health Educators and the contributions they made in the early fight to *change* Indian People's health. The key is change.

As the struggle against infectious disease began to show favorable results there was a resulting evolution of de-evolution of Public Health Education. With the eradication of polio, tuberculosis, impetigo, parasites, trachoma, (the list is large), the Public Health Education found itself becoming narrower and narrower in focus and scope. Eventually during the late 1970's and well into the 1980's Public Health Educators were reduced to the roles of "patient educators" closely tied to the "Medical Model" in clinics or hospitals, focusing on the sharing of *health information*, and *physical disease*. While this may seem appropriate, at the same time a new form of disease was being recognized, that being, "*disease of choice*". This concept is based on the premise that disease, today, is the result of the individual choices that are made, choices that result in a lifestyle. In many cases the individual appears not to have a choice, rather the social conditions that exist allow for

involvement in disease whether one consciously makes the choice to participate or not. Today, disease comes in the form of abuse, alcohol, drugs, lack of education, lack of exercise, economic deprivation, and eating habits to name a few. Ultimately, these behaviors end up in the health care system, requiring more and more resource attention and care. More than ever there seems to be a need for a specialized group of professionals who can deal with whole communities in terms of social epidemiology, social re-grouping, organizing and education.

This brings us to the present. Within the Indian Health Service and within our Tribal programs, it was and is apparent that many of our professional-level personnel are not being utilized at their full professional value. Because of the current mode of practice (*health information dissemination*) many Health Professionals and Tribal Health Personnel do not understand the true role of education, again, education to change behavior. Likewise, many new incoming personnel are *not required* to practice "PUBLIC" health education, and in some areas are *not allowed* to practice "PUBLIC" health education. Many barriers are in place that have led to this conclusion: *Education within the Indian Health Service and in our Tribal Programs has become totally misunderstood, misrepresented, mismanaged, under utilized and ineffective.* There is little in the way of demonstration of impact. While other "health disciplines" can parade reduced rates of disease because of technology, prevention is hard to evaluate. We could continue to list those "things" that are

in place that are reducing and constraining the practice of preventative education, health promotion, disease prevention.

While many observations and conclusions can be made as to why there has been a de-evolution of the Education, one fact remains - there is a basic lack of understanding as to what Health Educators are "supposed to do". Once there is an understanding of the purpose, the practice, and the implementation of true "Public Health Education" in it's professional and discipline sense, one begins to realize the potential of Health promotion, disease prevention and health education holds in moving whole communities to again mobilize in search of answers to social and psycho-social ills that are in place that acts as the foundations for illness and disease. It has become easy for all of us involved in health care to look for scientific answers to all of our problems. But we no longer face insects of infectious diseases. The science of human groups, their inter-actions, belief systems, mores, norms, expectations, and histories now play a role as the most important element in health and wellness.

This Report emphasizes the need for an understanding that of all the Disciplines that exist in the IHS, Public Health Education and Health Promotion, Disease Prevention is a discipline which by policy, is totally community based and provides the personnel to help communities mobilize people into action against disease. Public Health Education provides in the Public Health arena a means to create conditions that will move people to become aware of the social

factors in place as well as group behaviors that can be addressed to begin true prevention. Our greatest weapon today against alcohol, abusive behavior, child neglect, violence, drug use, school drop out, and economic deprivation lies not in a clinic or hospital. It lies in our understanding of ourselves, our personal and group obstacles, and our understanding and belief in our own ability to solve those obstacles.

In conclusion, it is our belief that the greatest resource in true prevention and movement from illness and non-wellness no longer lies in medical or scientific knowledge. It lies in understanding human dynamics and the systems that support illness and non-wellness. For all of us to continue with the mistaken belief that "health education" equates to "health information" will continue to bypass a resource that, if recognized, organized, and utilized to its fullest disciplinary practice could once again prove the most valuable tool in Indian Health. In the beginning of IHS, Public Health Education proved itself an effective and invaluable tool in the fight against disease. In the belief that all things resolve, we once again face obstacles that again require that communities mobilize all their resources through *Awareness, Recognition, and Action*. It is our belief that Education (*not information*) holds the key to unlocking the potential of whole communities beginning to realize their power to change elements on their own behalf. The key lies in our understanding of the difference between Education and Information. If we do not explore and understand the differences between *education*

and information, we are re-enforcing the approach that hopes the Sciences will someday be able to solve human suffering. The statistics revealed in this Report emphasizes that the mere medical approach to illness and disease is not enough. Success must include a combination of the Science of medicine in combination with the Human Sciences to improve wellness and alleviate illness.

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ATTACHMENT A

“The Impact of Health Programs on Behavior Among Three United South and Eastern Tribes”

COMPARISON CHARTS:

**St. Regis Mohawk Tribe
Mississippi Band of Choctaw
Passamaquoddy Pleasant Point Tribe**

ATTACHMENT B

ORIGINAL PROPOSAL: “The Impact of Health Programs on Behavior Among Three United South and Eastern Tribes”

ATTACHMENT C

STATUS REPORT: “The Impact of Health Programs on Behavior Among Three United South and Eastern Tribes”

- 1. Sample Status Report**
- 2. Schedule of Visits**
- 3. Time Lines**